Airtron Division, Litton Industries, Inc.
Morris Plains, Morris County, New Jersey

Airtron, a Division of Litton Industries, is involved with a variety of industrial processes, including plating operations. This facility has been operating for at least 19 years on this 26-acre site. Plating wastes were discharged into 2 unlined sludge beds for at least 13 years, until 1979, at which time the sludge beds were excavated. Analysis of ground water on-site indicated contamination by trichloroethylene, tetrachloroethylene and other solvents.

Presently, all plating wastes go through an on-site treatment plant and treated wastes are discharged to the Whippany River. NJDEP Division of Water Resources has been actively involved with Airtron to clean up the aquifer, but there has not been a significant improvement in the ground water quality.

Since this is an active Water Resources Enforcement case, this site is being assigned a low priority.

Deborah Mazur
Environmental Specialist
6/25/85

Preliminary Assessment

Airtron Division, Litton Industries, Inc.
Morris Plains, Morris County, N.J.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: NJ | 02 SITE NUMBER: D030239412

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Airtron Division, Litton Ind.	200 East Hanover Ave.				
03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Morris Plains	NJ	07950	Morris		
09 COORDINATES LATITUDE: 40° 49' 04"	LONGITUDE: 74° 28' 15"	Block 601 & 602, Lot 1 & 1 - 26 acres			

10 DIRECTIONS TO SITE (Starting from nearest public road)
Route 287 N to Morristown - Hanover Street Exit. Make left onto Hanover. Proceed for about one mile, Airtron is on the right.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Airtron Division, Litton Ind.	200 East Hanover Ave.			
03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER	
Morris Plains	NJ	07950	(201)539-5500	
07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)			
09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER	
			( )	

13 TYPE OF OWNERSHIP (Check one)
☑ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER-OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☑ YES ☐ NO DATE 9 / 29 / 83 (MONTH DAY YEAR)
BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☑ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)
☑ A. ACTIVE ☐ B. INACTIVE ☐ C. UNKNOWN

03 YEARS OF OPERATION
unknown (BEGINNING YEAR) | present (ENDING YEAR) operating at least 19 yrs. ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
Analyses from monitoring wells have found various solvents such as 1,2 dichloroethylene, trichloroethylene, and tetrachloroethylene. Analyses of the lagoon sludge indicated high levels of chromium, copper, & zinc. (Attachment D,F)

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
Airtron has contaminated the aquifer beneath its site by use of their unlined lagoons. Groundwater contamination has migrated off-site. (Attachment E)

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☑ C. LOW (Inspect on an available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER
Steve Spayd	NJDEP/DWR/Geology		(609)292-0668
04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Deborah Mazur	HSMA	NJDEP	(609)984-3017	6 / 25 / 85 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NJ	D030239412

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☑ C. SLUDGE
- ☐ D. OTHER (Specify)
- ☐ E. SLURRY
- ☑ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS: unknown

CUBIC YARDS:

NO. OF DRUMS:

03 WASTE CHARACTERISTICS (Check all that apply)

- ☑ A. TOXIC
- ☐ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☑ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☐ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE X	132,800 gals.		(2) sludge beds 30x60x5 ft
OLW	OILY WASTE			
SOL	SOLVENTS X	unknown		
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
SLU	chromium		sludge bed	42,300	ppm
SLU	copper		sludge bed	31,500	ppm
SLU	zinc		sludge bed	6,322	ppm
SOL	trichloroethylene		monitoring well data	9,620	ppb
SOL	tetrachloroethylene		monitoring well data	5,120	ppb
SOL	1,2 dichloroethylene		monitoring well data	1,370	ppb
SOL	benzene		monitoring well data	10	ppb
			Attachments D,E,F		

V. FEEDSTOCKS (See Appendix for CAS numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

NJDEP - Div. of Water Resources Central Files (sampling data)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NJ	D030239412

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☑ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: 10/5/84) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

Contaminants have percolated down through (2) unlined lagoons into aquifer. Monitoring well analyses show solvent contamination. (Attachment D)

01 ☑ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☑ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

The Whippany River is located S-SW, approximately 2000 feet downgradient of Airtron. Groundwater flow also appears to be in a southerly direction, toward the Whippany River. (Attachment E)

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

[illegible] — POTENTIAL — ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 ☑ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) 04 NARRATIVE DESCRIPTION

The unlined sludge beds are in direct contact with soil beneath it. Analysis of the sludge shows contamination with chromium, copper, zinc. (Attachment C & F)

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE | 02 SITE NUMBER

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include species) or (species)

01 ☐ L CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☑ M UNSTABLE CONTAINMENT OF WASTES — 02 ☑ OBSERVED (DATE: 6/79) ☐ POTENTIAL ☐ ALLEGED
(Spills / runoff / standing liquids / leaking drums)
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Two unlined sludge beds were observed on-site, which receive sludge from plating operations. (Attachment C)

01 ☑ N DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
The contaminants have migrated off-site in the groundwater and are appearing in the Mennen Company well located 500 feet downgradient of Airtron. (Attachment E)

01 ☐ O CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

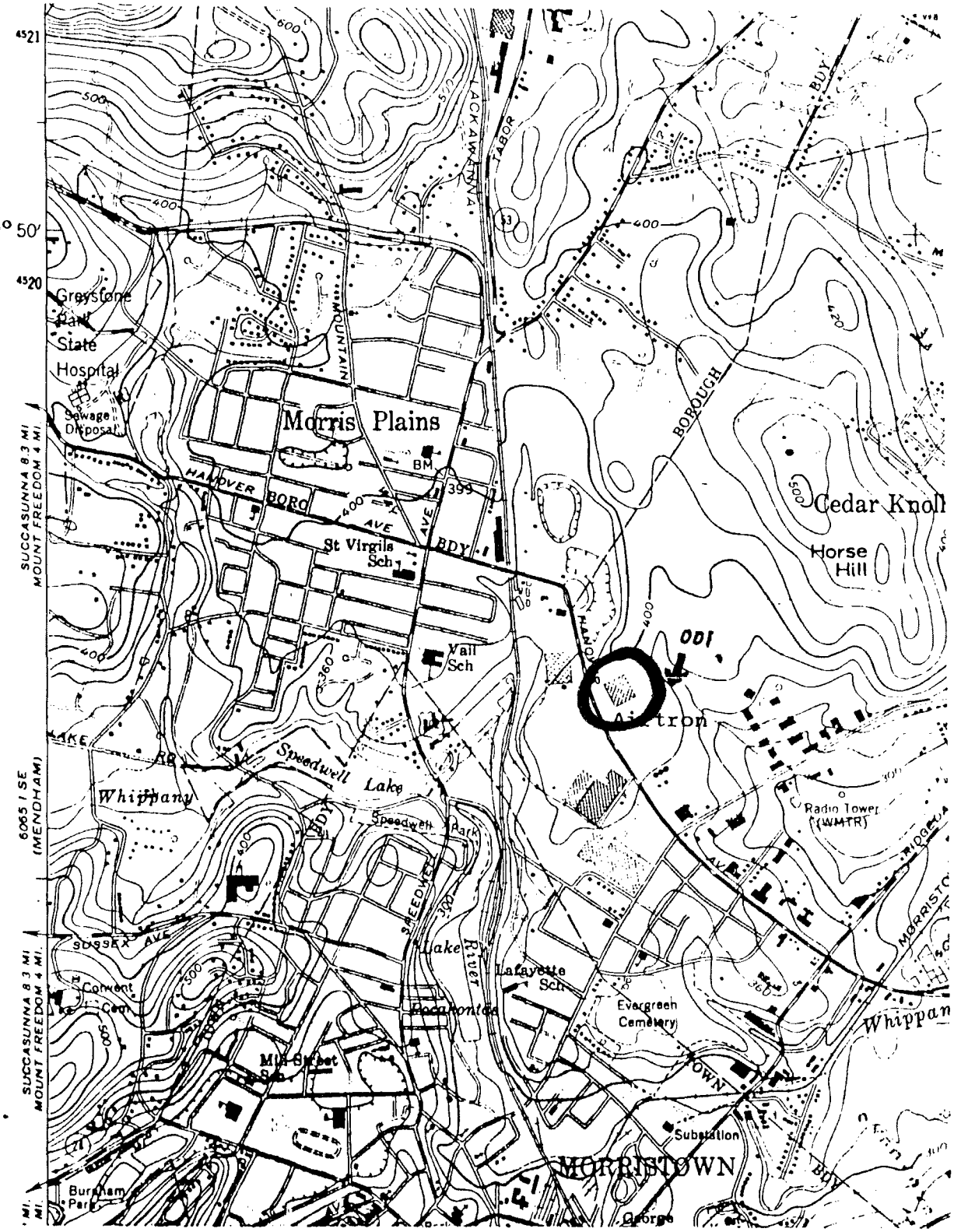
01 ☐ P ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

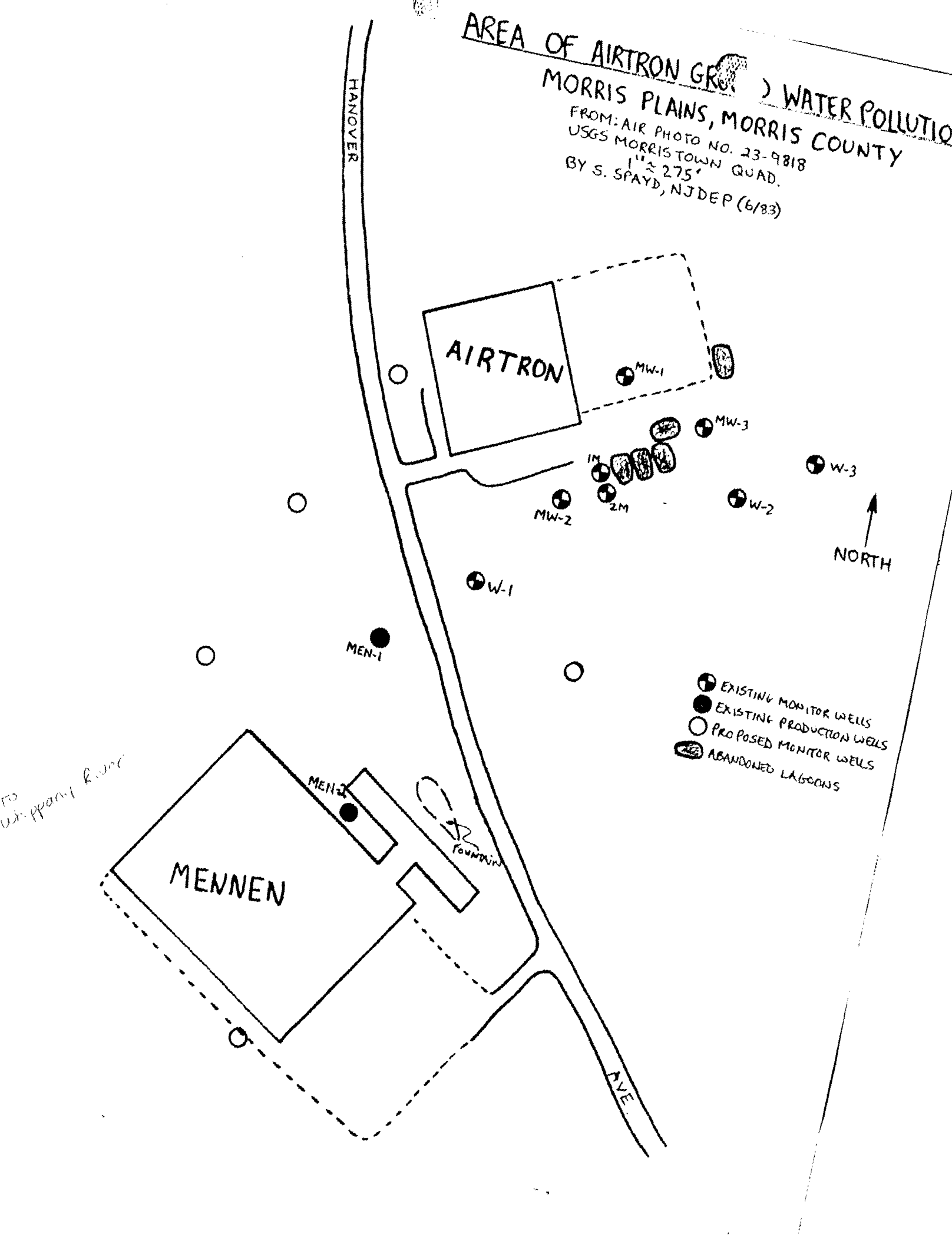
V. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)
NJDEP - Div. Water Resources Central files.



Location Map of Airtron Division, Litton Systems
Morris Plains, Morris County, New Jersey
June 15, 1974, Page 1 of 1
From U.S. Geological Survey, N4045-W7422.5/7.5

MN GN
11° 0°22'
196 Mils 7 Mils

Figure 1 Topographical Site Map


AREA OF AIRTRON GR WATER POLLUTIO
MORRIS PLAINS, MORRIS COUNTY
FROM: AIR PHOTO NO. 23-9818
USGS MORRISTOWN QUAD.
1" = 275'
BY S. SPAYD, NJDEP (6/83)
HANOVER
AIRTRON
MW-1
MW-3
IN
2M
MW-2
W-3
W-2
W-1
NORTH
MEN-1
MEN-2
MENNEN
FOUNTAIN
AVE.
EXISTING MONITOR WELLS
EXISTING PRODUCTION WELLS
PROPOSED MONITOR WELLS
ABANDONED LAGOONS

Attachments

A: Facility description
B: Memo to file - discussion with DWR/Geologist
C: Sludge bed description
D: Monitoring well date - Volatile organics analyses
E: Mennen well date
F: Sludge bed data
Miscellaneous Information

INTRODUCTION

Airtron, Division of Litton Industries, Inc., located at 200 East Hanover Avenue, Morris Plains, New Jersey (latitude 40°49'04", longitude 74°28'15") conducts a variety of industrial processes. These include:

1. Metal fabrication and assembly of microwave components used in weather radar and communications.

2. Crystal growth of a variety of solid state metal oxides and intermetallic compounds for use in laser, semi-conductor and microwave applications.

3. Manufacture and wholesale distribution of simulated diamond jewelry.

The company employs approximately 360 people who work in a 100,000 square foot facility located on a 26-acre property. In the process of manufacturing the above products, a variety of wastes are generated, temporarily stored in several parts of the main plant and then transferred to an outside hazardous waste storage area.

Airtron notified the U.S. Environmental Protection Agency (EPA) of its hazardous waste activities and has received an EPA identification number NJD030239412.

Wastes are stored on-site for a period less than 90 days. Normal removal operations entail notifying the hazardous waste transporter, Advanced Environmental Technology Corporation (AETC), located in Mount Olive, New Jersey, to come to the site for removal of these wastes. Greater detail about AETC is given in Section 2.0 of this plan.

The purpose of this plan is to familiarize facility personnel with procedures to minimize hazards from sudden or non-sudden release of hazardous wastes at Airtron.

Attachment A

ADM-012

MEMO

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO File

FROM Deborah Mazur, Environmental Specialist DATE June 25, 1985

SUBJECT Airtron, Div. of Litton Industries, Morris Plains, Morris County, N.J.

In a telephone conversation on this date with Steve Spayd, Geologist from DWR, the following points concerning Airtorn were discussed.

1) The sludge beds were removed in 1979-1980.

2) Monitoring wells were installed immediately after the removal of the sludge beds.

3) Monitoring wells are tested quarterly and still show high levels of contamination, with no improvement. DWR - Enforcement is to get involved and sample soil where sludge beds were located. Steve Spayd believes entire contents of the sludge beds were not removed and are continuing to contaminate the aquifer.

4) There are no residential wells in the immediate area. One municipal well is located one mile upgradient of Airtron.

5) Mennen Co., a plant adjacent to Airtron, has a well which pumps water for non-contact cooling water. This well is downgradient to Airtron, and is intercepting the plume of contamination from Airtron. The contaminants in the well water are volatized to a significant degree, and the water is discharged to the Whippany River. At that point, levels of contaminants range from extremely low to not detectable.

Attachment B

DOM-012

27 Aug 79 ltr

MEMO NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO Frank Markewicz thru Moxon Tan

FROM Jeffrey Hoffman - MS&E Element - Passaic-Hackensack Basin DATE August 10, 1979

SUBJECT Airtron/Division of Litton Systems - Morris Plains

In response to an on-site industrial inspection conducted by this office, enforcement action was initiated in the form of a Directive, dated April 24, 1979. (Copy Attached) Besides dealing with NPDES violations and deficiencies, the Directive addressed Airtron's utilization of unlined sludge beds.

Airtron located at 200 East Hanover Avenue, has a plating process. The raw materials used in their plating operation include aluminum, brass, copper, silver, nickel, cadmium, gold, tin, chromic acid, sulfuric acid, nitric acid and muriatic acid.

The ground discharge consists of the sludge beds. As designed there are two sludge beds each having dimensions of 30x60x5 feet and a volume of 67,080 gallons. They are unlined and are supposed to receive sludge from the closed loop treatment systems and the disposal of the contents of the batch spillage treatment systems. The liquid is supposed to dissipate by evaporation and percolation and the dried sludge disposed of in an acceptable area. However, what is actually happening is that the sludge beds never dry out and no sludge has been removed in at least the last thirteen years. Both are full of sludge. Two additional sludge beds have been constructed so that the original two could dry out but this has not yet worked. In addition, every single tank within the plating room is pumped, when exhausted and needing replacement, to the appropriate batch treatment system, treated and discharged to the sludge beds. (Copy of Plating Room Floor Plan Enclosed)

Airtron responded to the section of the Directive dealing with the sludge beds on June 8, 1979. A copy of their response is attached. We will be ordering Airtron to cease use of these beds and to remove their contents. We will also want monitoring wells installed to access the extent of any groundwater contamination.

We would appreciate it if you would assign this case to one of your geologists and respond to the following questions as soon as possible.

A) Who has been assigned the case?

B) Should we wait until he has seen the site before initiating clean up measures?

C) Was the information requested satisfactory? If not, what additional information is necessary?

Afterwards we will need to know the number and location of monitoring wells. I hope that both of our offices can cooperatively approach and resolve this matter.

A7:G25

RECEIVED

AUG 21 1979

State of New Jersey
Dept. Environmental Protection
Division Water [illegible]

Attachment C

Litton AIRTRON

200 East Hanover Avenue, Morris Plains, New Jersey 07950 201 539-5500

December 3, 1984

State of New Jersey
Dept. of Environmental Protection
Division of Water Resources
CN-029
Trenton, N. J. 08625

Attn: Mr. Jeffrey Hoffman

Dear Sir:

Enclosed you will find copies of the analytical results of the first round of samples taken by our consultant as part of the Airtron monitoring program. After viewing the results, it was decided to have wells No. W1, MW-2, MW-3 analyzed again for the #601 & 602 series. I am also enclosing a copy of those results for samples taken on November 8, 1984 and analyzed by Princeton Testing Labs.

In addition, this letter will confirm the dates for the second round in our quarterly sampling program. So that you have time to split the samples if you desire, we have set the dates at December 13 and 14, 1984.

I would like to apologize for the delay in forwarding this information to you.

Very truly yours,

John A. Nicola

aw

John A. Nicola
Plant Engineer

Attachment D

Old Hook Road Westwood, New J[illegible] 675 201[illegible]6-6644
91 Roseland Av
Caldwell, N.J.

VOLATILE ORGANIC ANALYSIS

DATE COLLECTED	DATE ANALYZED	DATE
September 6 & 7, 1984		October 5, 1984

PARAMETERS	SAMPLE IDENTIFICATION AND CONCENTRATION				
	Airtron #1	MW-3	2-M	MEN-1	MEN-2
CHLOROMETHANE	< 10	< 10	< 10	< 10	< 10
BROMOMETHANE	< 10	< 10	< 10	< 10	< 10
DICHLORODIFLUOROMETHANE	< 10	< 10	< 10	< 10	< 10
VINYL CHLORIDE	< 10	< 10	< 10	< 10	< 10
CHLOROETHANE	< 10	< 10	< 10	< 10	< 10
METHYLENE CHLORIDE	< 10	< 10	< 10	< 10	< 10
TRICHLOROFLUOROMETHANE	< 10	< 10	< 10	< 10	< 10
1,1-DICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
1,1-DICHLOROETHYLENE	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROETHYLENE	< 10	1370	67.6	12.4	< 10
CHLOROFORM *	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
1,1,1-TRICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
CARBON TETRACHLORIDE	< 10	< 10	< 10	< 10	< 10
BROMODICHLOROMETHANE *	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROPROPANE	< 10	< 10	< 10	< 10	< 10
1,3-DICHLOROPROPYLENE	< 10	< 10	< 10	< 10	< 10
TRICHLOROETHYLENE	6440	3470	475	700	41.3
DIBROMOCHLOROMETHANE*	< 10	< 10	< 10	< 10	< 10
1,1,2-TRICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
2-CHLOROETHYLVINYL ETHER	< 10	< 10	< 10	< 10	< 10
BROMOFORM *	< 10	< 10	< 10	< 10	< 10
1,1,2,2-TETRACHLOROETHANE	< 10	< 10	< 10	< 10	< 10
TETRACHLOROETHYLENE (PER-)	5360	7090	250	230	< 10
CHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
TTHMs (SEE NOTE)					
	1924	1925	1926	1927	1928

RESULTS EXPRESSED IN PARTS PER BILLION UNLESS OTHERWISE STATED
NOTE TOTAL TRIHALOMETHANES (TTHMs) - SUM OF FOUR COMPOUNDS INDICATED BY ASTERISKS (*).
N.D. - NOT DETECTABLE
N.A. - NOT APPLICABLE

Carol A. Brice

Laboratory Resources, Inc.
Hook Road Westwood, New Jersey 07675 201 644

Converse Consultants
91 Roseland Avenue
Caldwell, N.J. 07006

AIRTRON

VOLATILE ORGANIC ANALYSIS

83-07204-04

DATE COLLECTED	DATE ANALYZED	DATE
September 6 & 7, 1984		October 5, 1984

PARAMETERS	SAMPLE IDENTIFICATION AND CONCENTRATION				
	#2	#3	MW-2	Field Blank	Trip Blank
CHLOROMETHANE	< 10	< 10	< 10	< 10	< 10
BROMOMETHANE	< 10	< 10	< 10	< 10	< 10
DICHLORODIFLUOROMETHANE	< 10	< 10	< 10	< 10	< 10
VINYL CHLORIDE	< 10	< 10	< 10	< 10	< 10
CHLOROETHANE	< 10	< 10	< 10	< 10	< 10
METHYLENE CHLORIDE	< 10	< 10	< 10	< 10	< 10
TRICHLOROFLUOROMETHANE	< 10	< 10	< 10	< 10	< 10
1,1-DICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
1,1-DICHLOROETHYLENE	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROETHYLENE	207	< 10	21.1	< 10	< 10
CHLOROFORM *	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
1,1,1-TRICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
CARBON TETRACHLORIDE	< 10	< 10	< 10	< 10	< 10
BROMODICHLOROMETHANE *	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROPROPANE	< 10	< 10	< 10	< 10	< 10
1,3-DICHLOROPROPYLENE	< 10	< 10	< 10	< 10	< 10
TRICHLOROETHYLENE	36.2	< 10	9620	< 10	< 10
DIBROMOCHLOROMETHANE*	< 10	< 10	< 10	< 10	< 10
1,1,2-TRICHLOROETHANE	< 10	< 10	< 10	< 10	< 10
2-CHLOROETHYLVINYL ETHER	< 10	< 10	< 10	< 10	< 10
BROMOFORM *	< 10	< 10	< 10	< 10	< 10
1,1,2,2-TETRACHLOROETHANE	< 10	< 10	< 10	< 10	< 10
TETRACHLOROETHYLENE (PER-)	41.8	< 10	5120	< 10	< 10
CHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,3-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,2-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
1,4-DICHLOROBENZENE	< 10	< 10	< 10	< 10	< 10
TTHMs (SEE NOTE)					
	1929	1930	1931		

RESULTS EXPRESSED IN PARTS PER BILLION UNLESS OTHERWISE STATED.
NOTE: TOTAL TRIHALOMETHANES (TTHMs) ARE SUM OF FOUR COMPOUNDS INDICATED BY ASTERISKS (*).
N.D. - NOT DETECTABLE
N.A - NOT APPLICABLE

OCT 10 1984

CONVERSE CONSULTANTS
CALDWELL, N.J.

Carol A. Ciricillo

(D)

Princeton Service Center
U.S. Route 1
(609) 799-5000
TLX 84-3432

princeton testing laboratory

DATE: 11-28-84

TO: Airtron
200 E. Hanover Ave
Morris Plains NJ 07950

ATT: J. Nicola

JOB NO. 35957

AUTHORIZATION: 57965

SAMPLE:

REPORT OF ANALYSIS

VOLATILE ORGANICS

	Detection(a) Limit	ug/l Well #1	Well #2	Well #3
Acrolein	---	---	---	---
Acrylonitrile	---	---	---	---
Benzene	10	86	ND	ND
Bis(chloromethyl) ether	---	---	---	---
Bromoform	100	100	ND	ND
Carbon Tetrachloride	20	ND	ND	ND
Chlorobenzene	10	ND	ND	ND
Chlorodibromomethane	20	ND	ND	ND
Chloroethane	20	ND	ND	ND
2-Chloroethylvinyl ether	50	ND	ND	ND
Chloroform	20	90	85	185
Dichlorobromomethane	20	ND	ND	ND
Dichlorodifluoromethane	50	ND	ND	ND
1,1-Dichloroethane	10	< 10	ND	ND
1,2-Dichloroethane	10	ND	ND	ND
1,1-Dichloroethylene	10	< 10	< ND	ND
1,2-Dichloropropane	10	ND	ND	ND
1,3-Dichloropropylene	50	ND	ND	ND
Ethylbenzene	10	ND	ND	ND
Methyl bromide	100	ND	ND	ND
Methyl chloride	200	ND	ND	ND
Methylene Chloride	50	ND	ND	ND
1,1,2,2-Tetrachloroethane	100	ND	ND	ND
Tetrachloroethylene	20	290	1100	1400
Toluene	10	ND	ND	ND
1,2-Trans-dichloroethylene	10	35	180	460
1,1,1-Trichloroethane	20	31	13	ND
1,1,2-Trichloroethane	50	ND	ND	ND
Trichloroethylene	20	340	2000	1200
Trichlorofluoromethane	50	ND	ND	ND
Vinyl Chloride	20	ND	ND	ND

a) Due to the high concentration encountered, the sample volume analyzed was reduced. The detection limit is therefore higher.

Brian Janke, Manager
Organic Laboratory

BJ:na

(D)

Recent Data

On January 4, 1983 samples were obtained from Mennen's well No. 1 and three other points along the flow path from the well head to its final discharge into the Whippany River. The total volatile organic concentrations were:

Location	Concentration	Reduction in Contaminants from Well Head
Well head	1382 ppb	
Cooling pond	439 ppb	68%
001 discharge sampling point	101 ppb	93%
Just upstream of Whippany River	5 ppb	99.6 %

Potable water intakes exist downstream of this point of the Whippany River. At the time of this sampling the natural flow path and aeration was sufficient to remove a substantial amount of volatile organics. However, regular monitoring of Mennen's discharge is necessary.

Mennen's wells are used for non-contact cooling only.

Also on January 4, 1983 ground water elevations were measured in the Airtron monitor wells. Review of these elevations confirmed ground water flow from Airtron towards the Mennen wells.

Conclusions

1. Airtron has contaminated the aquifer beneath its site by use of their unlined lagoons.

2. Ground water contamination has migrated off-site - at least as far as the Mennen wells.

3. Mennen's wells are to some unknown degree decontaminating Airtron's ground water pollution.

Attachment E

Recommendations

1. Five (5) additional monitor wells should be installed to delineate all ground waters contaminated by Airtron and to fully evaluate the ground water flow in relation to Mennen's wells.

2. These monitor wells should be installed according to NJDEP specifications (attachment A) and should be located as shown on attachment B. The final locations should be approved by a NJGS geologist before installation. The geologist should be notified of the drilling date at least two (2) weeks prior to drilling.

3. During drilling operations split spoon soil samples should be obtained at five-foot intervals, at changes in soil strata and at zones that show obvious signs of contamination. The soil samples should be saved for future reference and/or analyses.

4. The wells should be screened in the same water bearing zone as the Mennen wells. The wells should be four (4) inches in diameter with 20-foot long screens.

5. After completion of the wells, a quarterly sampling and reporting program should be initiated by Airtron. Water quality and water level data should be submitted to NJDEP in both tabular and contoured form. The data should be obtained from all the monitor wells and both Mennen production wells.

6. Airtron's hydrogeologic consultant should oversee the above work.

7. Along with the first quarterly report an assessment by the consultant should be made (along with NJDEP) as to the extent of ground water contaminated by Airtron and the effectiveness of Mennen's wells as decontamination points. Review of subsequent quarterly reports may be needed to confirm this conclusion.

8. If the Mennen wells are proven to be intercepting the entire contaminant plume emanating from Airtron then negotiations between Mennen, Airtron and NJDEP should be initiated to insure an agreement for continued decontamination as long as is necessary.

9. If the Mennen wells are proven not to be intercepting the entire contaminant plume and/or an agreement between Mennen, Airtron and NJDEP cannot be reached, then Airtron should be required to install their own decontamination system.

10. Mennen's non-contact cooling water discharge (001) permit should be revised to include sampling and limits for volatile organics.

If you have any questions or require further clarification, please call. I will continue to assist in this case as needed.

SES:bks

Attachments

(E)

ENVIRONMENTAL AGENCY
Division Dart Environment and Services Company
525 WEST NEW CASTLE STREET
ZELIENOPLE, PENNSYLVANIA 16063
(412) 452-9360 TELEX 86-6259

May 22, 1979
Samples Dated May 8, 1979
Samples Rec. May 11, 1979
Samples Anal. May 14, 1979

Airtron, Inc.
200 East Hanover Avenue
Morris Plains, New Jersey 07950
Attention: Mr. Leon Pieta

Liquid Samples from Sludge Beds (mg/liter)

	Sample 1	Sample 2	Sample 3	Sample 4
pH	9.10	7.15	8.20	8.00
CN	0.36	0.18	0.09	<0.01
Cr^{6+}	2.24	48.9	1.18	0.14
Cr^{t}	3.50	56.0	1.46	0.39
Cu	1.78	4.3	1.26	0.47
Zn	1.68	8.05	0.04	2.35
Ag	0.07	0.13	0.02	<0.01
Ni	0.26	0.31	0.24	0.04
Cd	0.02	0.05	0.03	0.01
TDS	5588.	17914.	5276.	2450.

Sludge Samples (mg/Kg in Dry Solids)

	Sample 1	Sample 2	Sample 3	Sample 4
CN	<1.0	<1.0	<1.0	<1.0
Cr	3667.	42300.	392.	275.
Cu	2347	31500.	277.	448.
Zn	1214	6322.	1177.	878
Ag	212	938.	<10	<10
Ni	318	8558.	<10	<10
Cd	91	1380	<10	20
Dry Solids	60%	1.5%	83%	32%

Attachment F

Miscellaneous Information

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF AUTHORIZATION

PERMIT NO.	ISSUANCE DATE	EFFECTIVE DATE	EXPIRATION DATE
NJ0025739	March 19, 1985	May 1, 1985	April 30, 1990

ISSUED TO	FOR ACTIVITY/FACILITY AT	OWNER
Airtron Division, Litton Ind. 200 East Hanover Avenue Morris Plains, NJ 07950	Same as Applicant	Same as Applicant

ISSUING DIVISION	TYPE OF PERMIT	STATUTE(S)	APPLICATION
Water Resources	NJPDES-DSW	N.J.S.A. 58:10A-1 et seq.	NJ0025739

A PERMIT TO

discharge to a tributary of the Whippany River, classified as FW-2 Non-trout, in accordance with the effluent limitations, and monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

By the Authority of:
John W. Gaston Jr., P.E.
Director
Division of Water Resources

DEP AUTHORIZATION

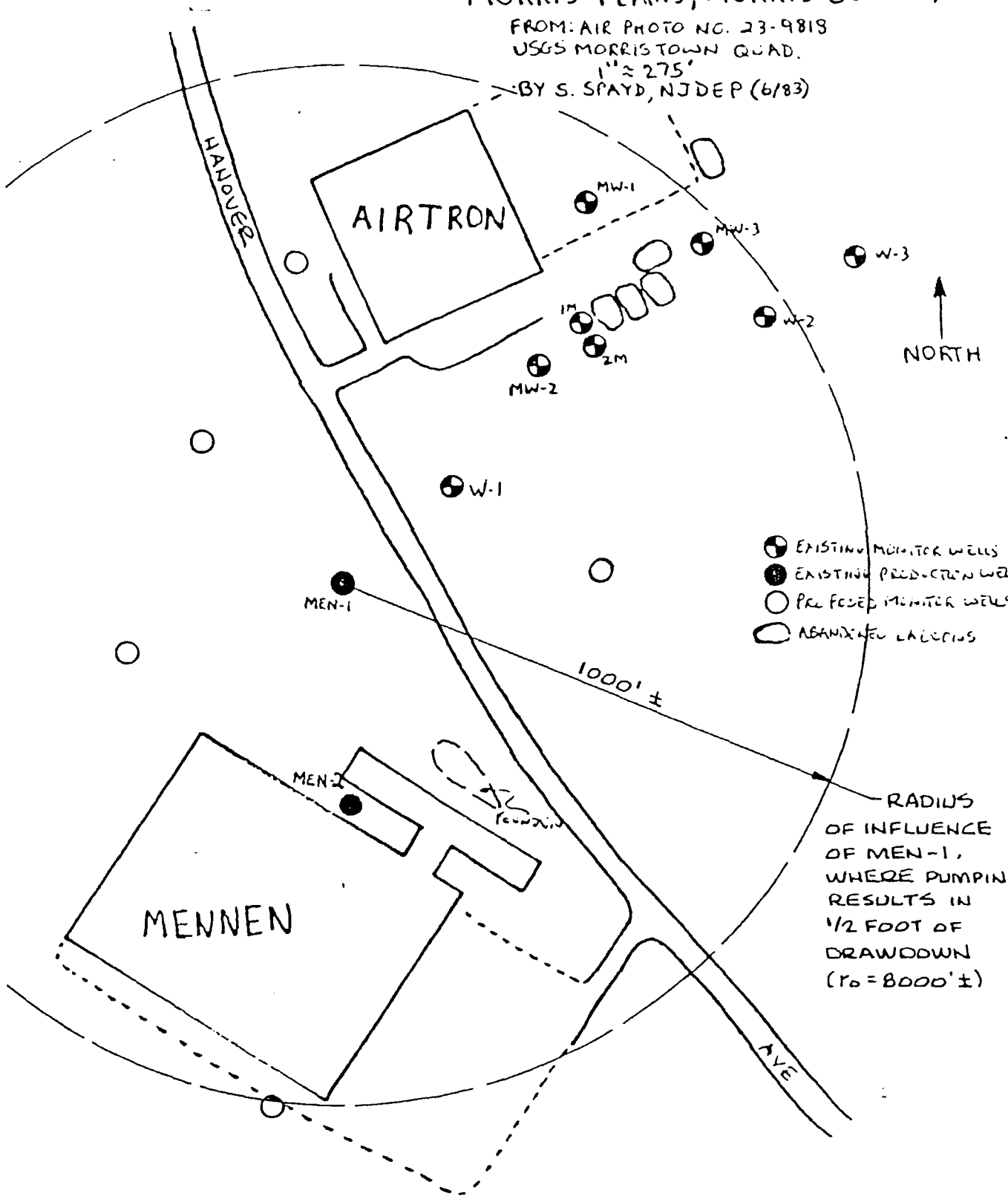
DEP-008
2/84

THIS NOTICE MUST BE CONSPICUOUSLY DISPLAYED AT THE ACTIVITY/FACILITY SITE.

AREA OF AIRTRO GROUND WATER POLLUTIO

MORRIS PLAINS, MORRIS COUNTY

FROM: AIR PHOTO NO. 23-9818
USGS MORRISTOWN QUAD.
1" ≈ 275'
BY S. SPAYD, NJDEP (6/83)



LOCATION MAP

GROUNDWATER MONITORING PROGRAM
MORRIS PLAINS, N.J.
FOR AIRTRON - DIV. OF LITTON IND.

Project No
83-0720

Converse Consultants — Geotechnical Consultants

Figure No
1

Approved for publication _____ by _____

4 NO. 056/78

NJDEP INSPECTION FORM

Report Prepared for:

Generator [X]

Transporter [ ]

HWM (TSD) facility [X]

Facility Information

Name: AIRTRON, INC. DIV. NITROL SYST.

Address: 200 E. HANOVER AVE.
MORRIS PLAINS

Lot: 1, 1 Block: 601, 602

County: MORRIS

Phone: 201-539-5500

EPA ID#: NJD 002397412

Date of Inspection: 9-29-83

Participating Personnel

State or EPA personnel: DONNA R. DAWSON, NJDEP

Facility personnel: JOHN NICOLA, R. KRATT, MAINTENANCE
PLANT ENGINEER

Report Prepared by Name: DONNA R. DAWSON

Region: NORTH

Telephone #: 201-648-3669

Reviewed by: J Roy

Date of Review: 11/7/83

FACILITY NAME: AIRTRON INC

ADDRESS: 200 E. HANOVER AVE
MORRIS PLAINS

TIME IN: 1:30 PM

COUNTY: MORRIS

TIME OUT: 5:00 PM

EPA ID #: NJD030239412

DATE OF INSPECTION: 9-29-83

PHOTOS TAKEN [X] YES [ ] NO

If yes, how many? 2

SAMPLES TAKEN [ ] YES [X] NO NUMBER OF SAMPLES ____

NJDEP ID # ____

MANIFESTS REVIEWED [X] YES [ ] NO

Number of manifests in compliance 6

Number of manifests not in compliance 0

List manifest document numbers of those manifests not in compliance.

Morris Plains, Morris

PRELIMINARY ASSESSMENT FILE SEARCH

Lat. 40° 49' 04" Long 74° 28' 15"

NJDEP

DIVISION OF WATER RESOURCES: - new info

A. Enforcement Parsip. Jeff Hausman - recall back → ACTIVE WATER CASE

B. Groundwater Kathy Locaine yes Obtained 4/26 (all inclusive files)

C. Other Geo? yes obtained 4-26 85

DIVISION OF WASTE MANAGEMENT:

4/26 A. HSMA Mike Belesco NO

6/17 B. Enforcement Parsippany - yes Jeff Hausman

C. Solid Waste

ENVIRONMENTAL QUALITY:

A. Air Pollution

B. Pesticides

C. Other

DIVISION OF FISH AND GAME:

OFFICE OF SCIENCE AND RESEARCH:

A. Industrial Survey

B. Other

N.J. DEPARTMENT OF HEALTH:

LOCAL AUTHORITIES:

A. Health Department

B. Town or County Clerk

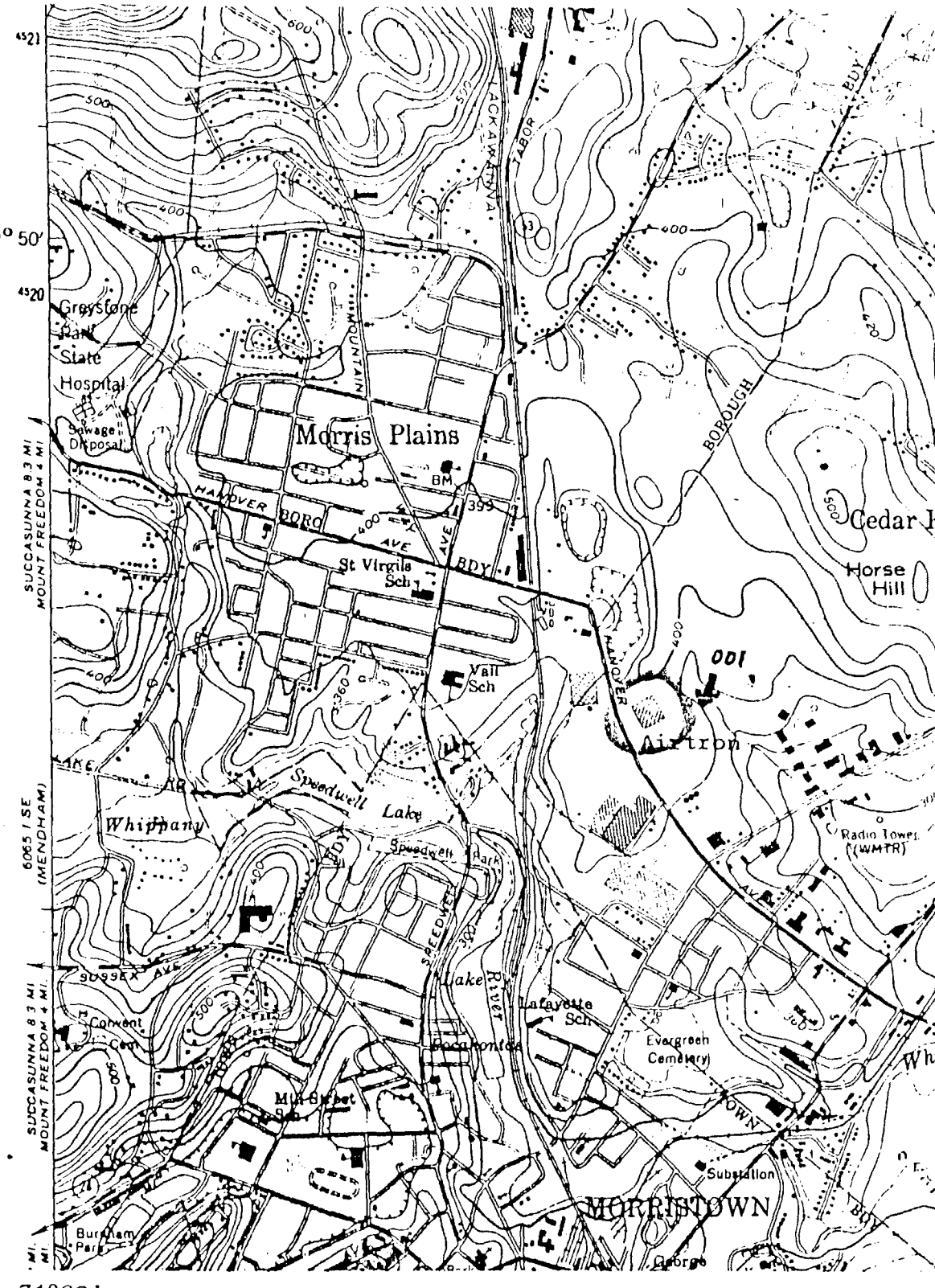
UNITED STATES GOVERNMENT:

check → A. EPA

B. other

Note: PA done on [illegible] by MP (in files) → no mention of GW problem

200 East Hanover Ave Morris Plains 07950



Location Map of Airtron Division, Litton S
Morris Plains, Morris County, New Jersey
June 15, 1974, Page 1 of 1
From U.S. Geological Survey, N4045-W7422.5

Figure 1 Topographical Site Map

Summary of Findings

Facility Description and Operations

The Company manufactures microwave components and grows crystals, both for laser rods and simulated jewelry (Zirconia gems). They have a machine shop, print Department, electroplating area, assembly shop and a quality control laboratory. The plating wastes is treated in their waste treatment plant and they have a NJPDES permit for the discharge (NJ0025739)

The crystals are grown by taking calcium arsenide powder and subjecting it to high heat and electricity. They also grow a variety of solid state metal oxides and intermetallic compounds for use in laser, semi-conductor and microwave applications.

The microwave components are used by the weather radar and communication industries. When their business is slow, the Company can operate for several months at a time without generating any hazardous waste. The sludge from their treatment plant is disposed of at WRC Processing Co. Pottsville Pa.